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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,006	05/09/2002	Jan Hall	21547/0283	9722

7590 06/13/2007  
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EXAMINER
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COMSTOCK, DAVID C

ART UNIT	PAPER NUMBER
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3733

MAIL DATE	DELIVERY MODE
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06/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/980,006

Applicant(s)

HALL ET AL.

Examiner

David Comstock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007 and Interview 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9-15,19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-7, 9-15, 19 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Language throughout these claims renders them indefinite. For example, in claim 1, the term "a substantial porosity" is unclear and indefinite since what may be "substantial" is relative and undefined. Likewise, the language "is designed with" does not make clear whether the invention necessarily and actually possesses the noted features or is simply "intended" or "designed" to be a certain way. In claim 5, "substantial corrosion resistance" is similarly relative and undefined. Applicant is required to review all the claims for clarity and definiteness and make appropriate corrections.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 9-15, 19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn (U.S. Pat. no. 3,605,123).

Hahn discloses and implant a layer (13) that constitutes a barrier with a substantial thickness. The layer has a channel network with porosity (figure 1-4, col 2:43-45) and mouths which are adapted to face a bone structure (see figure 2 and 3) and as disclosed, the mouth cross section diameter are less than the respective extents of the channel. Hahn discloses that the layer can be established on undulating or uneven surfaces (for example the threads of a screw (col 1:32-37)). The screw could be used for dental applications (col 5:46-50). Also, it is noted that the surface shown in figure 2 is undulating and uneven. Hahn also discloses the layer with a channel network having channel branches through the layer extending in all directions. The layer has a thickness up to 0.1 inch (col 3:49-50), which is in the range of 0.5-20 micrometer. Hahn discloses the claimed invention except for having a porosity of  $1 \times 10^7$ - $1 \times 10^{10}$  pores/cm<sup>3</sup> and with a mouth diameter in the range of 0.1-10 micrometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the implant of Hahn with a layer having a porosity of  $1 \times 10^7$ - $1 \times 10^{10}$  pores/cm<sup>3</sup> and with a mouth diameter in the range of 0.1-10 micrometers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It is also noted that changing pore density and pore sizes is known in the art (e.g., Pilliar U.S. Pat. no. 3,855,638). Regarding claim 11, Hahn discloses the claimed invention except for the layer consisting of titanium oxide. It

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would have been obvious to one having ordinary skill in the art at the time the invention was made to make the layer of Hahn with titanium oxide, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. It is also noted that using such materials as titanium oxide or titanium alloy is known in the art (e.g., Pilliar U.S. Pat. no. 3,855,638). With regard to the statement of intended use and other functional statements, they do not impose any structural limitations on the claims distinguishable over Hahn which is capable of being used as claimed if one so desired. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference "teach" what the subject patent teaches, but rather it is only necessary that the claims under attack "read on" something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

### ***Response to Arguments***

Applicant's arguments regarding the newly amended claims have been fully considered but are not persuasive.

It is noted that it is not necessary that the reference disclose identical materials, ranges of dimensions, etc. It has been held that where the general conditions of a claim

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are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Likewise, selecting a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In addition, the figures show an undulating surface (see Fig. 2). Moreover, "normally smooth," as disclosed by Hahn and cited by Applicant, implies that at some points or in certain applications the surface is not smooth. However, if claim 2 were amended to remove the qualifier "at least a greater part of" such that it recited channels extending completely through the layer to the interface of the layer and implant, it would overcome Hahn, which has little or no porosity at the interface.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Comstock whose telephone number is (571) 272-4710. Please leave a detailed voice message if examiner is unavailable. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached at (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*oe*

D. Comstock

  
EDUARDO C. ROBERT  
SUPERVISORY PATENT EXAMINER